

WE CLAIM:

1. A method for accessing, via a public network, a device connected to a privately addressed network, said method comprising the steps of:
- 5 automatically assigning a globally unique name in said public network to said device, wherein said name resolves to an address of a gateway of said privately addressed network;
- 10 automatically associating said globally unique name with a private address of said device; and
- automatically routing communications comprising said globally unique name to said device based on said private address.
2. The method of claim 1, wherein each of said steps are performed without human intervention.
- 15 3. The method of claim 1, wherein said public network comprises the Internet.
- 20 4. The method of claim 1, wherein said steps are performed by said gateway.
5. The method of claim 3, comprising the further step of automatically registering said globally unique name and an address of said gateway with a Domain Name System (DNS).
- 25 6. The method of claim 5, comprising the further step of automatically extracting data relating to said globally unique name from Dynamic Host Configuration Protocol (DHCP) data.
- 30 7. The method of claim 6, wherein said assigning step is executed in response to a request from said device.

8. The method of claim 7, wherein said request is received by a Dynamic Host Configuration Protocol (DHCP) server and said method comprises the further step of said Dynamic Host Configuration Protocol (DHCP) server providing an Internet Protocol (IP) address to said device.

9. The method of claim 3, wherein said routing step comprises the sub-steps of:

receiving a communication for said device from another device via the Internet, said communication comprising said globally unique name;

automatically obtaining a private address for said device, said private address dependent on said globally unique name; and

automatically routing said communication to said private address.

10. The method of claim 9, wherein said sub-steps are performed by said gateway.

11. An apparatus for accessing, via a public network, a device connected to a privately addressed network, said device comprising:

at least one communications interface for transmitting and receiving data;

a storage unit for storing data and instructions to be performed by a processing unit; and

a processing unit coupled to said at least one communications interface and said storage unit, said processing unit programmed to:

automatically assign a globally unique name in said public network to said device, wherein said name resolves to an address of a gateway of said privately addressed network;

automatically associate said globally unique name with a private address of said device; and

automatically route communications comprising said globally unique name to said device based on said private address.

5 12. The apparatus of claim 11, wherein said processing unit is programmed to automatically route said communications to said device without human intervention.

10 13. The apparatus of claim 11, wherein said public network comprises the Internet.

 14. The apparatus of claim 13, wherein said processing unit is further programmed to automatically register said globally unique name and an address of said gateway with a Domain Name System (DNS).

15 15. The apparatus of claim 14, wherein said apparatus comprises a network gateway device.

20 16. The apparatus of claim 14, wherein said processing unit is further programmed to automatically extract data relating to said name from Dynamic Host Configuration Protocol (DHCP) data.

25 17. The apparatus of claim 16, wherein said processing unit is further programmed to automatically assign said globally unique name to said device in response to a request from said device.

 18. The apparatus of claim 17, wherein said processing unit is further programmed to automatically provide an Internet Protocol (IP) address to said device.

30 19. The apparatus of claim 13, wherein said processing unit is further programmed to:

automatically receive a communication for said device from another device via the Internet, said communication comprising said globally unique name;

5 automatically obtain a private address for said device, said private address dependent on said globally unique name; and automatically route said communication to said private address.

20. The apparatus of claim 19, wherein said apparatus comprises a network gateway device.